IN THE CLAIMS:

This Listing of Claims will replace all prior versions, and listings, of claims in the subject Patent Application:

Listing of Claims:

1. (Currently amended) An automated method for monitoring the sensing of pre-selected targeted insects at a remote location, comprising:

(a) establishing a central monitoring station and at least one remote detection station located remotely therefrom;

(b) ~~acquiring~~ sampling at said remote detection station a sensed biometric ~~signal~~ signature of a candidate targeted insect;

(c) analyzing in situ said sensed biometric ~~signal~~ signature of said candidate targeted insect using a processor-based biometric signature recognition system, wherein said biometric signature recognition system has electronically stored therein a characteristic biometric signature ~~signal information~~ of said targeted insect species for automatic comparative verification relative thereto, whereby identification of the candidate is made with respect to the targeted insect species;

(d) transmitting from said remote station a positive alert signal of a candidate member of said targeted insect species responsive to said step of analyzing said biometric signal of a candidate targeted insect;

(e) receiving said positive alert signal at said central monitoring station;

and,

(f) determining at said central monitoring station a prevalence of said targeted insect species.

2. (Original) The automated method for monitoring the sensing of pre-selected targeted insects as recited in Claim 1, wherein said biometric signal is an acoustic signal, said characteristic biometric signal information is an acoustic signal information specific for a targeted insect species or an acoustic signature of a targeted insect species, and said biometric signature recognition system is an acoustic signature recognition system.

3. (Original) The automated method for monitoring the sensing of pre-selected targeted insects as recited in Claim 1, wherein said biometric signature recognition system includes a coarse signal detector, a power control device, an analog-to-digital signal convertor, and a digital signal processor.

4. (Original) The automated method for monitoring the sensing of pre-selected targeted insects as recited in Claim 1, further comprising the step of periodically polling said remote direct sensing station from said central monitoring station for checking the operational integrity thereof.

5. (Currently amended) An automated insect monitoring system comprising:

(a) a central monitoring station and at least one remote detection station located remotely therefrom, wherein said remote detection station includes an insect trap that includes a lure for attracting a targeted insect species;

(b) a biometric sensor in communication with said remote detection station operable to sample a sensed biometric signature of a candidate insect;

(c) a coarse signal detector receiving signal communications from said biometric sensor wherein said biometric sensor conveys to said coarse signal detector a the sensed biometric ~~signal~~ signature in analog form;

(d) an analog-to-digital converter receptively connected to said biometric sensor;

(e) a digital signal processor connected electronically to said analog-to-digital converter, wherein said digital signal processor has stored therein a biometric electronic signature or characteristic biometric signal information specific to a

targeted insect species for in situ comparative verification of said sensed biometric ~~signal~~ signature relative thereto, whereby identification of the candidate is made with respect to the targeted insect species;

(f) a radio-frequency transceiver connected electronically to said digital signal processor;

(g) a power controller receptively connected electronically to said coarse signal detector and connected electronically in a reversibly actuating manner to said analog-to-digital converter and to said digital signal processor and to said radio-frequency transceiver, wherein said power controller has a first stable low-power configuration and a second stable high-power configuration; and,

(h) an antenna connected electronically to said radio-frequency transceiver and in bidirectional electronic communication with said central monitoring station.

6. (Original) The automated insect monitoring system as recited in Claim 5, wherein said sensed biometric signal is a sensed acoustic signal, and said biometric electronic signature or characteristic biometric signal specific for a targeted insect species is an acoustic electronic signature or a characteristic acoustic signal information specific for a targeted insect species.

7. (Currently amended) An automated method for remotely monitoring the prevalence of targeted insects by directly detecting and signaling the presence of targeted pre-selected insects, comprising the steps of:

(a) establishing a central monitoring station and at least one remote detection station located remotely therefrom;

(b) establishing at said remote detection station a trap having a lure for attracting a targeted insect species and a processor-based alerting unit;

(c) providing at least one of said central monitoring station and said remote detection station with a pre-stored value for a characteristic biometric signal information uniquely identifying said targeted insect species;

(d) automatically detecting and verifying at said remote detection station the presence in said trap of a member of said targeted insect species, including the step of directly sensing said biometric characteristic by sampling a biometric signature of a trapped insect, and further including the steps of comparing in situ a directly sensed ~~value~~ biometric signature sample to said pre-stored value of said characteristic biometric signal information for comparative verification responsive thereto, whereby identification of a trapped insect is made with respect to the targeted insect species, and generating at said alerting unit a positive alert signal responsive to said step of comparing a directly sensed value and said pre-stored value of said biometric characteristic;

(e) transmitting said positive alert signal to said central monitoring station from said remote detection station; and,

(f) receiving at said central monitoring station said positive alert signal from said remote detection station and determining the prevalence of said targeted insect species.

8. (Original) The automated method for remotely monitoring the prevalence of targeted insects by directly detecting and signaling the presence of targeted pre-selected insects as recited in Claim 7, wherein said characteristic biometric signal information uniquely identifying said targeted insect species is a characteristic acoustic signal, and said biometric characteristic is an acoustic signal.

9. (Previously presented) The automated method for remotely monitoring the prevalence of targeted insects by directly detecting and signaling the presence of targeted pre-selected insects as recited in Claim 7, wherein said lure for attracting the targeted insect species is chosen from the group that includes pheromones, adhesive material inside the trap, nutritional substances, insecticides.

10. (Original) The automated method for remotely monitoring the prevalence of targeted insects by directly detecting and signaling the presence of targeted pre-selected insects as recited in Claim 7, further comprising the steps of detecting a sensed signal using a coarse signal detector, transforming said sensed signal from an analog form to a digital form and further transforming said digital form of said sensed signal from a time-domain spectrum to a frequency-domain spectrum, obtaining a signal correlation by performing a cross-correlation of said frequency-domain spectrum of said sensed signal with said pre-stored value of said characteristic biometric signal information, comparing said signal correlation with a putative identification threshold, and transmitting a positive alert signal to said central monitoring station responsive to said step of comparing said signal correlation with a putative identification threshold.

11. (Original) The automated method for remotely monitoring the prevalence of targeted insects by directly detecting and signaling the presence of targeted pre-selected insects as recited in Claim 7, further comprising the step of periodically polling said remote direct sensing station from said central monitoring station for checking the operational integrity thereof.

12. (Original) The automated method for monitoring the direct sensing of pre-selected targeted insects as recited in Claim 1, wherein said positive alert signal includes a unique remote detection station identifier.

13. (Original) The automated method for remotely monitoring the prevalence of targeted insects as recited in Claim 7, wherein said positive alert signal includes a unique remote detection station identifier.

14. (Original) The automated method for monitoring the direct sensing of pre-selected targeted insects as recited in Claim 1, wherein said step of analyzing said sensed biometric signal further includes a step of executing a sequence of processing steps stored in a computer readable medium.

15. (Original) The automated method for remotely monitoring the prevalence of targeted insects as recited in Claim 7, where said step of automatically detecting and discriminating further includes a step of executing a sequence of processing steps stored in a computer readable medium.

16. (Previously presented) The automated insect monitoring system as recited in Claim 5, including a computer readable medium that stores an executable sequence of processing steps, which is included in said digital signal processor.

17. (Previously presented) The automated insect monitoring system as recited in Claim 5, wherein said digital signal processor is operable to automatically generate a cross-correlation measure of said sensed biometric signal and said characteristic biometric signal information for comparison with a threshold parameter.